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XLVIII.—*Bornean Notes*. By R. BOWDLER SHARPE,
 LL.D., F.L.S., &c.

THE following notes embody my observations on several collections from Sarawak and Northern Borneo, submitted to me by Mr. Charles Hose, Mr. A. H. Everett, and Mr. Edward Bartlett, the Curator of the Sarawak Museum.

I have divided these notes into the following headings :—

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I. *First List of Birds from Mt. Kalulong, in Sarawak.*

A small collection of birds from Mt. Kalulong has recently been made for Mr. Charles Hose by his hunters. The present paper can be regarded only as a preliminary list of the avifauna of the mountain, as no altitudes have been marked by the native hunters, and it is evident that they have not as yet collected at any great height. It will be seen that some of the peculiar Kina Balu forms occur on Kalulong also.

The following is a complete list of the species in the collection. The nomenclature used is that of Mr. Everett (Journ. Straits Branch R. Asiatic Soc. 1889, p. 91), unless the contrary is stated.

Trichixus pyrrhopygus.
 Hydrocichla ruficapilla.
 Pomatorhinus borneensis.
 Stachyris poliocephala.
 — leucotis.
 — maculata.
 Cyanoderma bicolor.
 Malacopteron cinereum.
 — magnum.
 — affine.
 Alcippe cinerea.
 Staphidia everetti.
 Macronus ptilosus.
 Turdinus canicapillus.
 — atrigularis.
 — kalulongæ, sp. nov.
 — tephrops, sp. nov.
 Drymocataphus capistratoides.
 Ptilopyga leucogrammica.
 Anuropsis malaccensis.
 Turdinulus exsul.
 Iole olivacea.
 Hemixus malaccensis.
 — connectens.
 Criniger diardi.
 — gutturalis.
 — ruficrissus.
 — finschi.
 Tricophoropsis typus.
 Pycnonotus simplex.
 — salvadorii.
 Rubigula weberi.
 — paroticalis.
 Ægithina viridissima.
 Chloropsis zosterops.
 Irena criniger.
 Oriolus xanthonotus.

Dissemurus platurus.
 Lalage culminata.
 Xanthopygia cyanomelæna.
 Hypothymis occipitalis.
 Rhipidura perlata.
 Terpsiphone affinis.
 Philentoma velatum.
 — pyrrhopterum.
 Rhinomyias ruficrissa.
 Siphia everetti, *Sharpe* *.
 — beccariana.
 — nigrigularis, *Everett* †.
 Æthopyga temmincki.
 Anthothreptes phœnicotis.
 Arachnothera juliae.
 — modesta.
 — longirostris.
 Arachnoraphis robusta.
 Prionochilus xanthopygius.
 Platylophus coronatus.
 Pitta arcuata.
 Eucichla schwaneri.
 Calyptomena hosii.
 Buceros rhinoceros.
 Rhytidoceros undulatus.
 Anorrhinus galeritus.
 Berenicornis comatus.
 Nyctiornis amicta.
 Harpactes duvauceli.
 — kasumba.
 — erythrocephalus.
 Megalæma chrysopsis.
 — mystacophanes.
 Mesobucco duvauceli.
 — eximius, *Sharpe* †.
 Caloramphus fuliginosus.
 Rhinortha chlorophæa.

* Ibis, 1890, p. 366.

† Ibis, 1892, pp. 324, 441.

† Ibis, 1891, p. 45.

<i>Urococcyx erythrognaethus.</i>	<i>Miglyptes grammithorax.</i>
<i>Glaucidium borneense</i> , sp. nov.	---- tukki.
<i>Calypdomena viridis.</i>	<i>Micropternus badius.</i>
<i>Eurylæmus ochromelas.</i>	<i>Ceyx euerythra</i> , Sharpe*.
<i>Cymborhynchus macrorhynchus.</i>	<i>Halcyon conereta.</i>
<i>Corydon sumatranus.</i>	<i>Carcineutes melanops.</i>
<i>Xylolopes validus.</i>	<i>Zanclostomus javanicus.</i>
<i>Hemicercus sordidus.</i>	<i>Carpococcyx radiatus.</i>
<i>Lepocestes porphyromelas.</i>	<i>Palæornis longicauda.</i>
<i>Chrysophlegma malaccense.</i>	<i>Loriculus galgulus.</i>
— humii.	<i>Treron vernans.</i>
<i>Gauropicoides rafflesii.</i>	<i>Ptilopus jambu.</i>
	<i>Lobiophasis bulweri.</i>

The following notes relate to some of these species.

HYDROCICHLA RUFICAPILLA (T.): Everett, t. c. p. 101.

Mr. Hume has shown the distinctions between the sexes of this species (Str. Feath. vi. p. 361), and the observations of Count Salvadori as to the invalidity of my species, *H. rufidorsalis* (Sharpe, Ibis 1879, p. 255), are fully borne out by the series of specimens now in the Museum.

Mr. Hose's collection from Kalulong contains a fine adult male with the black back, and a young bird, said to be a male. This young bird has the markings of the adult, but the rufous colour of the head and back is much obscured and more dingy, the black of the back overwashed with rufous.

TURDINUS KALULONGÆ.

Similis *T. magnirostri*, sed pileo infuscato, gutture imo et præpectore toto cinereis minime striolatis, distinguendus. Long. tot. 6 poll., culm. 0·65, alæ 3·3, caudæ 2·8, tarsi 0·8.

Two specimens are in Mr. Hose's collection and I have compared them with a large series of *T. magnirostris* from the Hume collection. They are easily distinguished by their dusky grey head, which contrasts with the brown back, whereas in *T. magnirostris* the crown is brown like the back. There is a little blackish patch on the chin, which causes the pure white of the throat to stand out in bold relief against

* Cat. B. xvii. p. 179.

the grey of the lower throat and fore neck, these parts, moreover, not showing any of the dusky streaks which are a constant feature in *T. magnirostris*.

TURDINUS TEPHIOPS.

Similis *T. sepiario*, sed pileo saturate griseo, haud dorso concolore, hypochondriis et subcaudalibus lute cervinis, et gutture imo et præpectore cinereo striatis distinguendus. Long. tot. 5·2, culm. 0·8, alæ 3·0, caudæ 1·55, tarsi 1·1.

This species is like *T. sepiarius* on the upper surface, but has a dark head contrasting with the back, and is easily distinguished by its having buff flanks and under tail-coverts, as well as by the grey streaks on the throat. On the other hand, the tawny colour on the underparts allies the Kalulong bird to *T. abbotti*, but it is distinguished from the latter by its dusky cap and by the grey streaks on the fore neck.

CALYPTOMENA HOSII, Sharpe.

The young male differs from the adult only in having the blue on the breast less bright and less extended. The black markings on the upper surface are also present, whereas in the females they are absent on the nape and hind neck; at least this is the case with the birds now sent from Kalulong.

GLAUCIDIUM BORNEENSE.

G. simile G. brodiei et G. sylvatico, sed ab ambobus fascia cervicali alba distinguendum. Long. tot. 6·0 poll., culm. 0·55, alæ 3·65, caudæ 1·9, tarsi 0·8.

Mr. Hose has sent in his collection an adult of this species from Mt. Kalulong, and Mr. Everett has forwarded a young male from the Kinokok Valley on Mount Kina Balu.

I have compared these two specimens with the fine series of *G. brodiei* which we have in the British Museum from the Hume collection, and I cannot match them with any of our large series. We have no specimen which combines a grey head, a white neck-collar, and a dark back of rufous brown. Nearly every one of the adults from Tenasserim and from the Eastern Himalayas has a greyish back, not unlike the head in tint, and the back is ochreous. Of course I am not alluding to the spots and bars which occur in all adult birds,

but to the general tone of the coloration. I may remark that *Glaucidium pardalotum* of Swinhoe, from Formosa, is certainly not to be distinguished from true *G. brodiei*, now that we have a better series with which to compare it, instead of the meagre one which was at my disposal when I wrote the second volume of the 'Catalogue of Birds.'

Of course it is just possible that the Bornean species may turn out to be identical with the Sumatran *G. sylvaticum* (Bp.), but this also seems to have an ochreous neck-collar (*cf.* Sharpe, Cat. B. ii. p. 215).

II. *A List of the Birds collected by Mr. A. H. Everett on Mt. Penrisen and Mt. Poeh, in Sarawak.*

Mr. Everett has also explored Mount Penrisen and the adjacent hills, and his collectors have obtained some examples of interesting species, a list of which will be of use.

Myiophoneus borneensis. Penrisen Mt., June.

Ilydrocichla ruficapilla. Penrisen Hills; Poeh Mt., 3500 feet.

Orthotomus ruficeps. Penrisen Mt.; Poeh Mt.

— *cineraceus.* Poeh Mt., 4000 feet.

Burnesia superciliaris. Poeh River; Penrisen Mt.

Pomatorhinus borneensis. Penrisen Mt.; Poeh Mt., 4500 feet.

Stachyris leucotis. Penrisen Hills; Poeh Mt.

— *borneensis.* Penrisen Mt.; Poeh Mt., 4000 feet.

Cyanoderma bicolor. Poeh Mt., 4800 feet.

Malacopteryx cinereum. Penrisen Mt.

Alcippe cinerea. Penrisen Mt.; Penrisen Hills; Poeh Mt., 3000 feet.

(The specimen from Mt. Poeh is rather greyer on the head than examples from other localities, and has faint grey streaks on the throat.)

Herpornis brunescens. Penrisen Mt.; Poeh Mt.

Staphidia everetti. Poeh Mt., 4000–4500 feet.

Turdinus canicapillus. Penrisen Mt.; Poeh Mt., 4000 feet.

— *atrigrularis.* Penrisen Mt.; Poeh Mt., 4000 feet.

Trichostoma rostratum. Penrisen Mt.

Eupetes macrocerus, Sharpe, Ibis, 1890, p. 367. Penrisen Mt.

Anurophasis malaccensis. Penrisen Hills.

Turdinulus exsul. Penrisen Mt.; Poeh Mt., 4000 feet.

Iole oliracea. Penrisen Mt.

Hemixus malaccensis. Penrisen Mt.

— *connectens.* Penrisen Mt.; Poeh Mt., 4000–4800 feet.

- Criniger diardi*. Poeh Mt., 3500-4000 feet.
 — *gutturalis*. Penrisen Mt.
 — *ruficrissus*. Penrisen Mt.; Poeh Mt., 4800 feet.
 — *fuschi*. Penrisen Mt.
Pycnonotus simplex. Penrisen Mt.; Poeh Mt.
 — *salvadorii*. Poeh Mt., 3500 feet.
Rubigula weberi. Penrisen Hills.
 — *paroticalis*. Penrisen Hills.
Chloropsis zosterops. Penrisen Mt.
 — *viridinucha*. Penrisen Mt.; Poeh Mt.
 — *kinabaluensis*. Penrisen Mt.
Dendrophila corallipes. Penrisen Mt.
Pteruthius æralatus. Poeh Mt., 4500 feet.
Pityriasis gymnocephala. Poeh Mt.
Hyloterpe grisola. Poeh Mt.
 — *whiteheadi*. Poeh Mt., 4000 feet.
Hemipus obscurus. Penrisen Mt.
 — *picatus*. Penrisen Mt.; Poeh Mt., 4000 feet.
Buchanga stigmatops. Penrisen Hills; Poeh Mt., 4000-4500 feet.
Pericrocotus xanthogaster. Penrisen Mt.; Poeh Mt., 4000-4500 feet.
Muscicapula hyperythra. Poeh Mt., 4000 feet.
Erythromyias muelleri. Penrisen Hills; Poeh Mt., 4000-4500 feet.
Rhipidura perlata. Penrisen Hills.
Terpsiphone affinis. Penrisen Hills.
Philentoma velutina. Poeh Mt., 4000 feet.
 — *pyrrhopterum*. Penrisen Hills; Poeh Mt., 4000 feet.
Rhinomyias pectoralis. Poeh Mt.; Penrisen Mt.
 — *gularis*. Poeh Mt., 4000 feet.
 — *ruficrissa*. Penrisen Hills.
Culicicapa ceylonensis. Penrisen Hills; Poeh Mt., 3000 feet.
Cryptolopha schwaneri. Penrisen Mt.; Poeh Mt., 4000 feet.
Siphia beccariana. Penrisen Hills, 900 feet.
 — *everetti*, Sharpe, Ibis, 1890, p. 366. Poeh Mt., 4500 feet.
 (Described from Penrisen.)
 — *nigrigularis*, Everett, Ibis, 1891, p. 45. Penrisen Mt.
 — *turcosa*. Penrisen Hills.
Æthopyga temmincki. Penrisen Mt.; Poeh Mt., 4000 feet.
Cinnyris pectoralis. Poeh Mt.
Anthothreptes hypogrammica. Penrisen Mt.
 — *simplex*. Penrisen Mt.
 — *phænicotis*. Poeh Mt.
Arachnothera modesta. Penrisen Mt.
 — *longirostris*. Penrisen Mt.
Dicaeum monticola. Penrisen Mt.
 — *trigonostigma*. Penrisen Mt.

Dicaeum chrysorrheum. Poeh Mt.

Prionochilus xanthopygius. Penrisen Mt.

Zosterops squamifrons, Sharpe, Ibis, 1892, p. 323. Penrisen Mt., 3500 feet.

— *aureiventer.* Penrisen Mt.; Poeh Mt.

Munia fuscans. Foot of Poeh Mt.

Pitta arcuata. Penrisen Hills; Poeh Mt., 4000 feet.

— *baudi.* Poeh Mt.

Chactura coracina. Poeh Mt.

Collocalia linchi. Poeh Mt.

Chrysophlegma humii. Poeh Mt., 4000–4500 feet.

Gecinus puniceus. Poeh Mt., 4000 feet.

Harpactes diardi. Poeh Mt., 4000 feet.

Megalania chrysopsis. Poeh Mt., 4000 feet.

Mesobucco duvauceli. Penrisen Mt.

— *eximius*, Sharpe, Ibis, 1892, p. 324. Penrisen Mt.

Rhamphococcyx erythrognathus. Poeh Mt.

Zanclostomus javanicus. Poeh Mt., 4000 feet.

Loriculus galgulus. Penrisen Mt.

Rhizothera longirostris. Penrisen Mt.

Melanoperdix nigra. Poeh River.

Rallina fasciata. Poeh Mt.

III. *Description of a new Spilornis from Borneo.*

Among the birds submitted to me by Mr. Edward Bartlett for identification is a specimen of a *Spilornis* obtained near Kuching on the 10th of June, 1892. On comparing it, I find that it is a representative of the rufous-chested group of the genus, hitherto known only from Celebes and the Sula Islands, viz. *Spilornis rufipectus* and *S. sulaensis* (cf. Cat. B. i. pp. 291, 292). I think, however, that it must be considered to be distinct from both these species. From *S. rufipectus* it differs in being much more closely banded underneath, *S. rufipectus* being broadly banded and spotted with white below. The tint of rufous on the chest is about the same as that of *S. rufipectus*, and is not so pale as that of *S. sulaensis*, to which, however, the Kuching bird bears a greater general resemblance. It may be diagnosed, as follows:—

† *SPILORNIS RAJA*, sp. nov.

Similis *S. sulaensi*, sed fasciis albidis pectoralibus et abdomi-

nalibus et axillarium valde crebrioribus distinguendus.

Long. tot. 18·5 poll., alæ 12·2, caudæ 7·0, tarsi 3·25.

Nearly adult. General colour above brown, with a slight purplish gloss, all the feathers margined with pale rufous on the hind neck and mantle, and with whitish on the rest of the upper surface of the body, including the wing-coverts; bastard-wing and primary-coverts and outer primaries black, tipped with white; rest of primaries blackish brown on inner web, all tipped with white and banded across with black, these black bands more conspicuous on the secondaries, which have the base of the feathers much broken up with white; tail-feathers black, tipped with white, crossed by two bands of equal width, a subterminal one of black preceded by a brown band, much broken up with white; crown of head and crest-feathers black, tipped with pale sandy colour, the forehead and eyebrow decidedly whiter; ear-coverts ashy grey, black posteriorly; cheeks and throat white, with a few dusky streaks on the latter; lower throat, fore neck, and chest dark tawny rufous; remainder of under surface from the breast downwards thickly barred with white arranged in twin spots or bars, the corresponding bands being pale rufous—these bands inclining to dusky brown on many of the flank-feathers, the dusky bars being very much narrower on the thighs and under tail-coverts; under wing-coverts and quill-lining white, with an irregular patch of rufescent and dusky bars on the former; the axillaries pale rufous, with large twin spots of white; quills ashy below, whitish at base, the black bands showing very distinctly.

Hab. Kuching, Sarawak.

Amongst other interesting birds from the neighbourhood of Kuching sent by Mr. Bartlett are specimens of *Lyncornis temmincki*, *Prionochilus everetti*, and *Cuculus micropterus*.

IV. *A Note on the Baza of Borneo.*

Mr. Edward Bartlett has also submitted to me for examination three skins of a *Baza* from Borneo, which are the first of this genus that I have ever had in my hands from that island. These specimens were all procured in the

Baram district by my friend Mr. C. Hose, and were added to the Sarawak Museum, which has a fine set of Mr. Hose's collections.

The history of *Baza* in Borneo is very simple, the first recorded occurrence in the island being a female bird procured by Diard near Pontianak and recorded by Schlegel in his 'Museum des Pays-Bas' as *Baza reinwardti* (Pernes, p. 6). In the 'Accipitres' of the 'Oiseaux des Indes Néerlandaises,' this same specimen is figured (pl. 28. fig. 5) as the young of *Baza magnirostris*. Salvadori (Ucc. Born. p. 11) united the Bornean species to *Baza jerdoni* (Blyth), and considered *B. sumatrensis*, Lafr., to be the same. In my 'Catalogue of Birds' (vol. i. p. 358) I united *Baza jerdoni* of Blyth to *B. reinwardti*, and I figured *B. sumatrensis* (pl. xi. fig. 1). In 1876 Dr. Brüggemann (Abhandl. nat. Ver. Bremen, v. p. 47) applied the name of *B. borneensis* to the Bornean bird.

In 1875 Mr. Hume (Str. F. iii. p. 313) described very fully some specimens of *Baza*, one from Native Sikhim and the other from Southern Tenasserim, and suggested the name *Baza incognita* for them, though he stated the probability of their being identical with the *Baza sumatrensis* of my 'Catalogue.'

The receipt of the three specimens from the Sarawak Museum goes far to clear up the difficulties connected with the above-mentioned identifications, but the specimens of *Baza* are so rare in collections that even now the series before me is meagre enough, though it contains the types of *Baza incognita* and *B. magnirostris*. One thing is quite evident, viz. that the possession of white tips to the crest-feathers merely indicates immaturity, a further sign of which is the white or pallid margins to the wing-coverts and the number of dark bars on the tail. In this latter character *Baza* follows *Pernis*, and the bands on the tail decrease to three in the adults and are four in number in the young.

My characters for *B. sumatrensis* in the 'Catalogue' are those of a young bird, and the absence of the throat-stripe is also a sign of immaturity. Thus the 'Key' to the genus *Baza* of the 'Catalogue' requires revision, as follows:—

- c''*. Throat white or buff, washed slightly with rufous, and showing a distinct central streak.
- c'''*. Fore neck uniform grey. *magnirostris*, p. 556.
- d'''*. Fore neck broadly streaked, with tawny buff or black.
- a⁴*. Streaks on fore neck and chest black; bands on flanks deep rufous brown; entire under surface of body with a deep tawny tinge *borneensis*, p. 557.
- b⁴*. Streaks on fore-neck and chest pale cinnamon rufous. $\left\{ \begin{array}{l} \textit{jerdoni}, \text{ p. 557.} \\ \textit{ceylonensis}, \text{ p. 556.} \end{array} \right.$

The confusion concerning the two British-Museum specimens of *Baza magnirostris* may now be considered as dissipated, but the circumstances require some explanation. When I wrote the 'Catalogue of Birds' I followed Gray's published 'List of Accipitres,' 2nd edition, 1848, apparently without going back to the registers—a somewhat rash proceeding, as I have learnt from subsequent experience. All the Accipitres were mounted in 1872, when I began to write the first volume of the 'Catalogue,' and one of my first duties was to unmount and place in the skin-collection all specimens of historical value, in which case the information on the stands was transferred to the labels on the skins when unmounted. Thus the two specimens of *Baza magnirostris*, entered on p. 41 of the 'List of Accipitres,' were transferred to the skin-collection and catalogued (*op. cit.* p. 356) as an adult male and young female, the former being figured. Soon after I seem to have had some doubts as to the identification of the female, as Colonel Legge states that I informed him that it was probably *Baza jerdoni*, when he wrote his work on the 'Birds of Ceylon.'

Having now to go into the whole matter again, I have examined the original register of Cuming's collection, and I find that in February 1842 245 specimens were purchased of Mr. Cuming, of which about 70 skins were from Malacca and the bulk from the Philippines. No. 121, the type of *Baza magnirostris*, is registered "June, Island of Manilla, South" !! Therefore, although no one has since discovered

a *Baza* in Luzon, it is quite possible that this species will be found to be confined to that island.

No. 163. *Baza lophotes*, ♂. Malacca.

Then follows a note :—"Exchanged with Mr. Gurney, of Norwich, 15th Dec. 1853."

No. 164. *Baza lophotes*, ♀. Malacca.

The specimen which bears this register still is the example of *Baza jerdoni* which did duty in Gray's 'List' and in the 'Catalogue' for the young female of *B. magnirostris*.

In this same list one specimen of *B. lophotes* from Malacca is recorded, but it is quite evident that there were *two*, because, besides the one given to Mr. Gurney in exchange, there was another, mounted in the gallery and recorded by me (Cat. B. i. p. 353, sp. *d*), and this specimen is in the Museum still. It bore, however, no register number, and had no doubt been confused by Mr. G. R. Gray with the female *B. jerdoni*, or *vice versa*.

The synonymy of the allied species will thus have to be modified as follows :—

1. BAZA MAGNIROSTRIS (Kaup).

Baza magnirostris, Gray, List Accipitr. Brit. Mus. p. 19 (1844: nomen nudum); Strickl. Orn. Syn. p. 127 (1855); Gray, Hand-l. B. i. p. 25, no. 230 (1869); Sharpe, Cat. B. i. p. 356, pl. x. fig. 1 (1874, pt.).

Hytiopus magnirostris, Kaup, Isis, 1847, p. 343 (ex Gray: deser. prim.).

Ariceda magnirostris, Bp. Consp. i. p. 20 (1850); id. Rev. et Mag. de Zool. 1854, p. 535.

Pernis crassirostris, Kaup, Isis, 1847, p. 339; id. Contr. Orn. 1850, p. 77.

2. BAZA CEYLONENSIS.

Baza ceylonensis, Legge, Str. F. iv. p. 247 (1876); Whyte, Str. F. v. p. 202 (1877); Legge, B. Ceylon, p. 94, pl. iii. (1879); Hume, Str. F. vii. p. 151 (1878: Wynaad).

Apparently a form closely allied to *Baza magnirostris*, with a grey chest in the adult. According to Legge it is known from the Central Province Sub-ranges of Ceylon, and

a young bird has been procured by Mr. Darling in the Wynaad.

3. *BAZA JERDONI*.

Lophastur jerdoni, Blyth, J. A. S. Beng. xi. p. 464 (1842), xv. p. 4 (1846).

Falco (Lophotes) reinwardti, Müll. & Schl. Verh. nat. Gesch., Aves, p. 35 (1839-44, pt.).

Pernis jerdoni, Gray, Gen. B. i. p. 24 (1845).

Aviceda sumatrensis, Lafr. Rev. Zool. 1848, p. 210.

Baza sumatrensis, Gray, Gen. B. iii. App. p. 2 (1849); Wall. Ibis, 1868, p. 18; Gray, Hand-l. B. i. p. 25, no. 232 (1869); Sharpe, Cat. B. i. p. 357, pl. xi. fig. 1 (1874); Hume, Str. F. iii. p. 313 (1876); id. & Davison, Str. F. vi. p. 25 (1878).

Baza incognita, Hume, Str. F. iii. p. 314 (1875: Native Sikhim, S. Tenasserim).

4. *BAZA BORNEENSIS*.

Baza reinwardti, Schl. Mus. Pays-Bas, Pernes, p. 5 (1862, pt.).

Baza magnirostris, pt. Schl. Ois. Ind. Néerl., Accipitr. p. 75, pl. 28. fig. 5; id. Mus. Pays-Bas, Accipitres, p. 135 (1873).

Baza jerdonii (nec (Blyth), Salvad. Ucc. Born. p. 11 (1874).

Baza borneensis, Brüggem. Abhandl. nat. Ver. Bremen, v. p. 47 (1878, descr. nulla).

I have adopted Dr. Brüggemann's name for this species, though he seems to have suggested it without the least acquaintance with it. As, however, the title has been placed on record, I describe the species under Brüggemann's name. I may add my belief that, when a large series of *B. borneensis* and *B. jerdoni* are available for comparison, the former bird will not be distinguishable from the latter. The adult bird from Malacca is almost identical with the two adult birds from Borneo, but the latter have browner and less rufous bars on the flanks.

I add a description of *B. borneensis*.

Adult male. General colour above dark brown, all the feathers being ashy brown, with a broad ending of blackish brown, which is slightly glossed with purple; hinder neck and mantle more rufescent, the feathers having black centres and rather broad rufous margins; wing-coverts like the back, with the same blackish ends to the feathers, the median and greater series pale rufous at the ends, the greater coverts glossed with bronzy brown and with indications of two blackish bars, the second one subterminal, so that the greater coverts resemble the secondaries; bastard-wing and primary-coverts black; quills brown, with purplish-black bands, four in number, the subterminal one broader with a whity-brown margin; tail earthy brown, with a narrow tip of the same colour and crossed with three black bands, the subterminal one very broad; crown of head black, with a long occipital crest of black feathers, with remains of small whitish tips; the base of the forehead and eyebrow rufous brown; lores and eyelid black; sides of face and sides of neck dull rufous; ear-coverts washed with grey; throat white, as also the chest, the feathers having more or less rufous on their edges and centred with a triangular patch of black, the throat with a mesial line of black; the lower breast and abdomen buffy white, broadly barred with pale rufous, these bars much broader on the flank-feathers and inclining to dark brown, the light bars being correspondingly narrow and in fact almost disappearing on some of the feathers; axillaries like the lower flanks and similarly barred; thighs nearly uniform white, with a few reddish spots; under wing-coverts rufous, with paler edges to the feathers; quills ashy below, white at the base, with the black bands strongly indicated. Total length 18 inches, culmen 1.05, wing 11.5, tail 7.5, tarsus 1.45.

A second specimen, which is a male, is still more rufous about the head, throat, neck, and chest, having the black throat-stripe and the black streaks on the fore neck very strongly developed, while the rufous-brown bars on the flanks are exceedingly strongly marked. Total length 18 inches, culmen 1, wing 12, tail 7.9, tarsus 1.55.

V. *Notes on Mr. A. H. Everett's Collections of Birds
from Northern Borneo and Sarawak.*

Among the collections recently sent home by my friend Mr. A. H. Everett there are several species deserving of notice, and one or two new to the Avifauna of Borneo.

1. *FALCO COMMUNIS*, Gm. : Everett, J. R. A. Soc. Straits Branch, 1889, p. 186.

A female from Pappan Island, Labuan, Feb. 1892. This is the true Peregrine Falcon of northern latitudes, and has evidently been shot in its winter-quarters. It is not the dark form of Peregrine which occurs in Java and the other Indo-Malayan islands, which has been identified by Mr. Gurney and others with *F. melanogenys* of Australia.

2. *MICROHIERAX LATIFRONS*, Sharpe : Everett, t. c. p. 185.

An adult bird from the Lower Kinabatangan River, Jan. 5, 1892.

3. *SCOPS MANTANANENSIS*, Sharpe, Bull. B. O. C. i. p. iv.

The two typical specimens of this pretty eared Owlet were procured on the island of Mantanani in December 1891. It is surprising to find an isolated form of *Scops* in such a southern locality, where its nearest ally is *Scops elegans* of the Japanese islands. It much resembles the last-named bird, but is more broadly streaked with black below, and is easily recognized by the white tips to the wing-coverts forming a double band.

4. *ANTHIPES OLIVACEA* (Hume) : Oates, B. Ind. ii. p. 34.

Two specimens are sent by Mr. Everett, one from Bongon and the other from Marudu River in Northern Borneo. I cannot separate the Bornean specimens from typical examples from Tenasserim. Mr. Oates likewise gives Java and Borneo as a habitat. Javan birds are in the Museum, but do not seem to me to be strictly identical with the Tenasserim birds ; but there is no example of this species from Borneo, and it is not included in Mr. Everett's list. So far as I know, this is the first record of it for the island.

5. *PICUMNUS INNOMINATUS* (Burton) : Hargitt, Cat. B. xviii. p. 549.

A female bird from Bongon in North Borneo, Jan. 7, 1893. "Iris orange-brown : orbital skin blackish : bill black : feet and claws bluish grey. Shot on low hills covered with old forests at Timbang Batu, Bongon River." The occurrence of this species in Perak and Sumatra rendered its capture in Borneo probable, but this is the first instance of a recorded specimen.

VI. *Additions to the Avifauna of Mount Kina Balu.*

In Mr. Everett's last collection are several birds procured by his hunters on Mt. Kina Balu, some of which form interesting additions to Mr. Whitehead's list, though the small number of species added to the mountain fauna since that gentleman's celebrated exploration shows with what extraordinary completeness he did his work.

1. *GEOCICHLA EVERETTI*, Sharpe, Ibis, 1892, p. 2.

The specimen now sent from Kina Balu agrees with the type-specimen from Mt. Dulit. The throat is not so pure white as in the Dulit example. The under tail-coverts are perfect in Mr. Everett's skin : they are orange-buff, only a little lighter than the flanks, the lateral ones externally light brown, producing a broad border to some of the skins.

2. *ERITHACUS CYANE* (Pall.) : Everett, J. R. A. Soc. Straits Branch, p. 98.

3. *BURNESIA SUPERCILIARIS* (Salvad.) : Everett, t. c. p. 102.

4. *MICROPUS MELANOLEUCUS* (Eyton) : Everett, t. c. p. 112.

5. *ORIOIUS MACULATUS*, V. : Everett, t. c. p. 118.

Mr. Everett has sent a young bird from Melangkok, Kina Balu. It seems to me to be referable to this species, which has been already included in the Bornean list by Mr. Everett on the strength of some specimens from South Borneo in the Leyden Museum. Some doubts had been felt as to the correctness of the latter locality for the species, but it is probably quite correct.

6. *LANIUS LUCIONENSIS*, L. : Everett, t. c. p. 121.

7. *GERYGONE SALVADORII*.

Gerygone salvadorii, Büttik. Notes Leyden Mus. xv. p. 175.

A female from Kinokok, Kina Balu, Nov. 1892. There can be no doubt that Mr. Büttikofer is correct in separating the Bornean *Gerygone* from *G. flaveola* and *G. sulphurea*, but the question is whether it is distinct from *G. modiglianii* of Salvadori (= *G. pectoralis*, Davison). Cf. Sharpe, Bull. B. O. C. no. ii. p. vii. I have compared it with the type of *G. pectoralis*, and the only difference that I can see is that the Bornean bird is a trifle darker.

8. *HIRUNDO RUSTICA*, L. : Everett, t. c. p. 134.9. *ARACHINORAPHIS EVERETTI*, sp. n.

A. similis A. affini, sed major, rostro longiore, et colore viridescentiore distinguenda. Long. tot. 7·2 poll., culm. 1·7, alæ 3·6, caudæ 2·15, tarsi 0·85.

Mr. Everett's collectors obtained eight specimens of this large Spider-hunter on Kina Balu, and on comparing them with a series from Java the difference in the olivaceous colour of the upper surface is very recognizable, as the Javan birds are more golden than olive-green. The under surface is very perceptibly lighter, the lower breast and abdomen being conspicuously ashy white.

10. *PRIONOCHILUS MACULATUS* (T.) : Everett, t. c. p. 140.11. *ZOSTEROPS SQUAMIFRONS*, Sharpe, Ibis, 1892, p. 323.12. *CALORNIS CHALYBEA* (Horsf.) : Everett, t. c. p. 143.13. *CORONE MACRORHYNCHA* (T.) : Everett, t. c. p. 145.14. *HARPACTES DULITENSIS*, Grant, Cat. B. xvii. p. 501, pl. 17.15. *EURYSTOMUS ORIENTALIS* (L.) : Sharpe, Cat. B. xvii. p. 33, pl. ii. fig. 1.

Mr. Everett has very kindly procured a series of nine specimens of this Roller from Kudat, Merabali, and Labuan, in order to test the occurrence of *Eurystomus calonyx* in Borneo. They all belong to true *E. orientalis*, which is the resident form

in the island. The only specimen of *E. calonyx* from Borneo that I have seen is the specimen procured by Mr. Everett on Mt. Penrisen and recorded in the 'Catalogue' (p. 39). I cannot make out where Mr. Dresser finds a difficulty in recognizing these two species, and he will have to produce true *Eurystomus orientalis* from Mantchuria or China or the Himalayas, if he wishes to convince ornithologists who value geographical distribution at its proper worth.

E. calonyx is a *summer* visitor to China and Mantchuria, and breeds in those countries. It doubtless also inhabits and breeds in the Himalayas, where it finds an altitude which corresponds with the conditions of its north-eastern summer habitat.

E. orientalis is the *resident* form in the Indo-Malayan region, and these localities are visited by *E. calonyx* during winter. I should never be surprised to learn that some of the visitors interbreed with the resident birds, and this may account for the slight variation sometimes seen in the extent of blue on the tail of *E. orientalis*; but I have examined a large number of *E. calonyx* in the collections of Mr. Styan and Mr. De La Touche, and have not found the least difficulty in recognizing them as thoroughly distinct from *E. orientalis*. The latter is a more massive bird and has a much larger and stronger bill than *E. calonyx*.

16. BUTASTUR INDICUS, Everett, t. c. p. 182.

17. PERNIS PTILORHYNCHUS, Everett, t. c. p. 184.

18. FALCO SEVERUS, Horsf.: Everett, t. c. p. 186.

This species was previously known only from Moera Teweh in the Island of Borneo. Mr. Everett sends a beautiful male specimen.

19. GLAUCIDIUM BORNEENSE, Sharpe, above, p. 549.

A young male from the Kinokok Valley, in the rufous phase, but differing from the corresponding stage of *G. brodiei*. There will always be a chance, until exact comparisons of a series have been made, that *G. borneense* may be identical with *G. sylvaticum* from high Sumatra, but my recollection

of the latter bird in the Leyden Museum advises me that the two species are not the same.

20. *NEOPUS MALAYENSIS*, Everett, t. c. p. 181.

21. *TURTUR TIGRINA*, Everett, t. c. 193.

22. *BAMBUSICOLA ERYTHROPHRYS*, Sharpe : Everett, t. c. p. 200.

My name is a little unfortunate for this species, as it seems to get a black head, and the rufous eyebrow disappears. This is seen in a beautiful adult male sent by Mr. Everett.

VII. *Description of the Nest and Eggs of Staphidia everetti.*

This nest, which was procured by Mr. Everett at Matang in Feb. 1892, is a good-sized cup-shaped structure, made almost entirely of fibres, with an external covering of fine rootlets and moss, with a few dead leaves interwoven. The eggs are white, thickly mottled and spotted with reddish brown, particularly at the larger end ; the underlying spots are dark grey and very distinct. Axis 0·73 inch, diam. 0·55.

XLIX.—*On the Mechanism of the Upper Mandible in the Scolopacidae.* By R. W. SHUFELDT, M.D., C.M.Z.S.

MR. W. P. PYCRAFT contributes a very interesting article, "On a Point in the Mechanism of the Bill in Birds," to 'The Ibis' for July 1893, and I am thankful to him for a copy of it which I have recently received.

Mr. Pycraft in that communication very well describes the peculiar power that the Dunlin (*Tringa alpina*) possesses of elevating the distal extremity of the superior mandible. I am inclined to believe that any true Scolopacine bird can voluntarily accomplish the same act at any time. Upon several occasions I have observed the performance of the feat in Wilson's Snipe (*Gallinago delicata*), and there can be no doubt but what the achievement, taken in connection with the extreme sensitiveness of the end of the upper beak in these birds, enables them to both quickly detect and *seize* their food in the soft ooze wherein they probe for it.